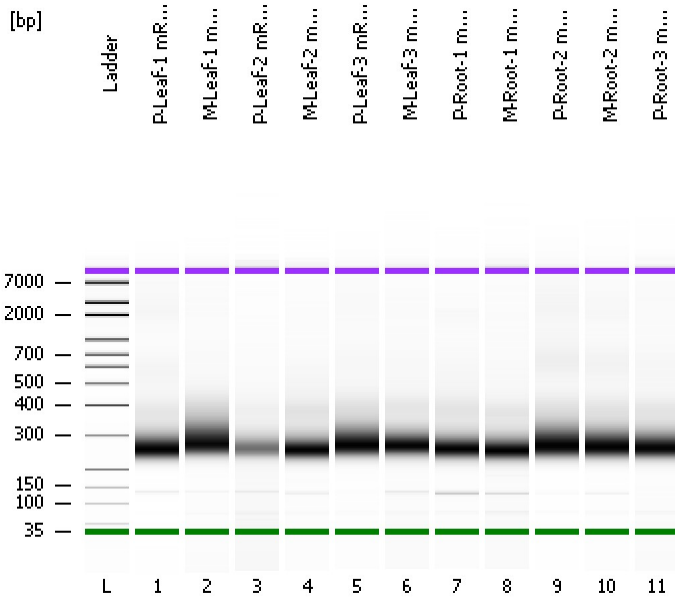


Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-10\2013-06-10_003.xad

Created: 6/10/2013 11:17:24 AM
Modified: 6/12/2013 4:45:30 PM

Electrophoresis File Run Summary



Instrument Information:

Instrument Name: DE13701086 Firmware: C.01.069
Serial#: DE13701086 Type: G2938B

Assay Information:

Assay Origin Path: C:\Program Files\Agilent\2100 bioanalyzer\2100 expert\assays\dsDNA\High Sensitivity DNA.xsy
Assay Class: High Sensitivity DNA Assay
Version: 1.03
Assay Comments: Copyright © 2003-2010 Agilent Technologies

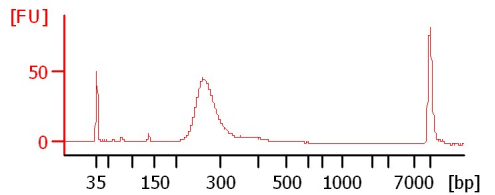
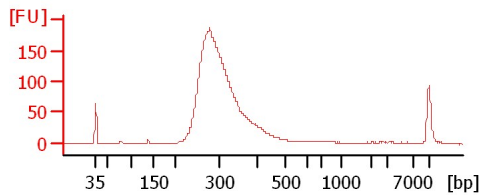
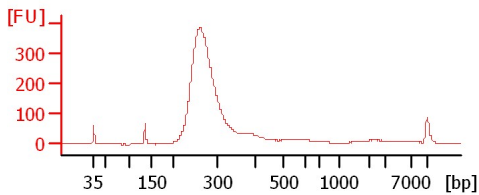
Chip Information:

Chip Lot #:
Reagent Kit Lot #:
Chip Comments:

P-Leaf-1 mRNA Lib

M-Leaf-1 mRNA Lib

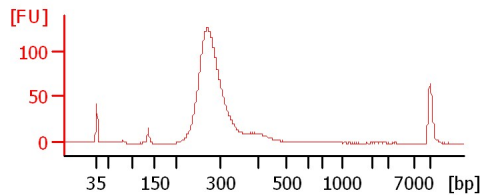
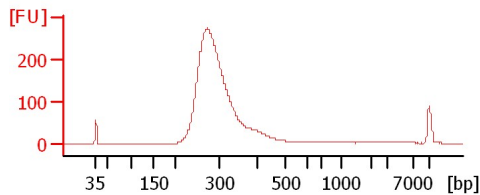
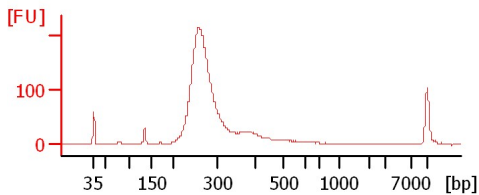
P-Leaf-2 mRNA Lib



M-Leaf-2 mRNA Lib

P-Leaf-3 mRNA Lib

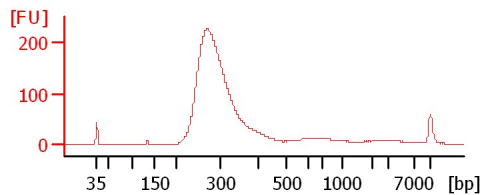
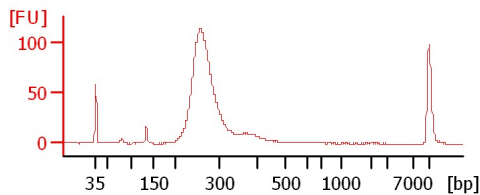
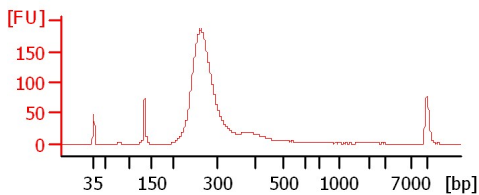
M-Leaf-3 mRNA Lib



P-Root-1 mRNA Lib

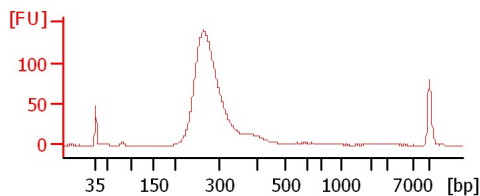
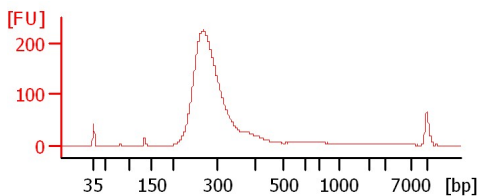
M-Root-1 mRNA Lib

P-Root-2 mRNA Lib 1:2



M-Root-2 mRNA Lib 1:2

P-Root-3 mRNA Lib 1:2



Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-10\2013-06-10_003.xad

Created: 6/10/2013 11:17:24 AM
Modified: 6/12/2013 4:45:30 PM

Electrophoresis File Run Summary (Chip Summary)

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
P-Leaf-1 mRNA Lib		<input type="checkbox"/>	✓			
M-Leaf-1 mRNA Lib		<input type="checkbox"/>	✓			
P-Leaf-2 mRNA Lib		<input type="checkbox"/>	✓			
M-Leaf-2 mRNA Lib		<input type="checkbox"/>	✓			
P-Leaf-3 mRNA Lib		<input type="checkbox"/>	✓			
M-Leaf-3 mRNA Lib		<input type="checkbox"/>	✓			
P-Root-1 mRNA Lib		<input type="checkbox"/>	✓			
M-Root-1 mRNA Lib		<input type="checkbox"/>	✓			
P-Root-2 mRNA Lib 1:2		<input type="checkbox"/>	✓			
M-Root-2 mRNA Lib 1:2		<input type="checkbox"/>	✓			
P-Root-3 mRNA Lib 1:2		<input type="checkbox"/>	✓			
Ladder		<input type="checkbox"/>	✓			

Chip Lot #

Reagent Kit Lot #

Chip Comments :

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-10\2013-06-10_003.xad

Created: 6/10/2013 11:17:24 AM
Modified: 6/12/2013 4:45:30 PM

Electrophoresis Assay Details

General Analysis Settings

Number of Available Sample and Ladder Wells (Max.) : 12
Minimum Visible Range [s] : 32
Maximum Visible Range [s] : 138
Start Analysis Time Range [s] : 33
End Analysis Time Range [s] : 137.5
Ladder Concentration [pg/μl] : 1950
Uses Standard Area for Ladder Fragments
Lower Marker Concentration [pg/μl] : 125
Upper Marker Concentration [pg/μl] : 75
Used Upper Marker for Quantitation
Standard Curve Fit is Point to Point
Show Data Aligned to Lower and Upper Marker

Integrator Settings

Integration Start Time [s] : 33.05
Integration End Time [s] : 137
Slope Threshold : 0.8
Height Threshold [FU] : 5
Area Threshold : 0.1
Width Threshold [s] : 0.6
Baseline Plateau [s] : 0.5

Filter Settings

Filter Width [s] : 0.5
Polynomial Order : 4

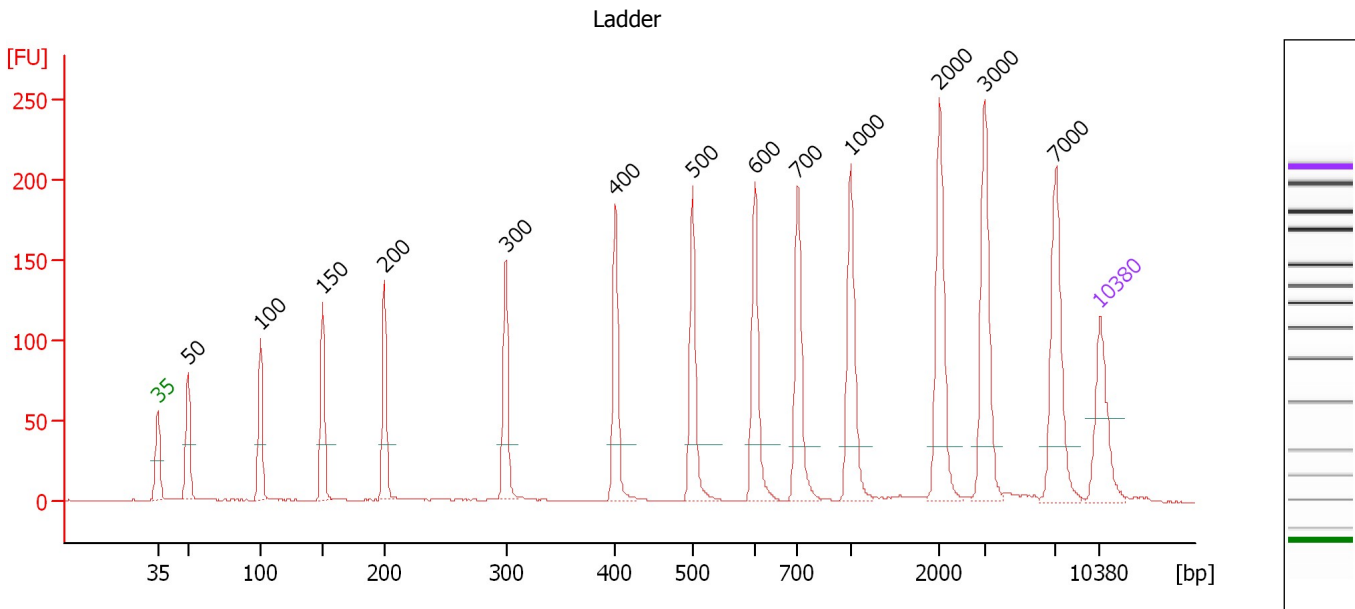
Ladder

Ladder Peak	Size	Area
1	35	160
2	50	210
3	100	208
4	150	221
5	200	242
6	300	270
7	400	305
8	500	306
9	600	336
10	700	321
11	1000	366
12	2000	413
13	3000	411
14	7000	400
15	10380	214

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-10\2013-06-10_003.xad

Created: 6/10/2013 11:17:24 AM
 Modified: 6/12/2013 4:45:30 PM

Electropherogram Summary



Overall Results for Ladder

Noise: 0.1

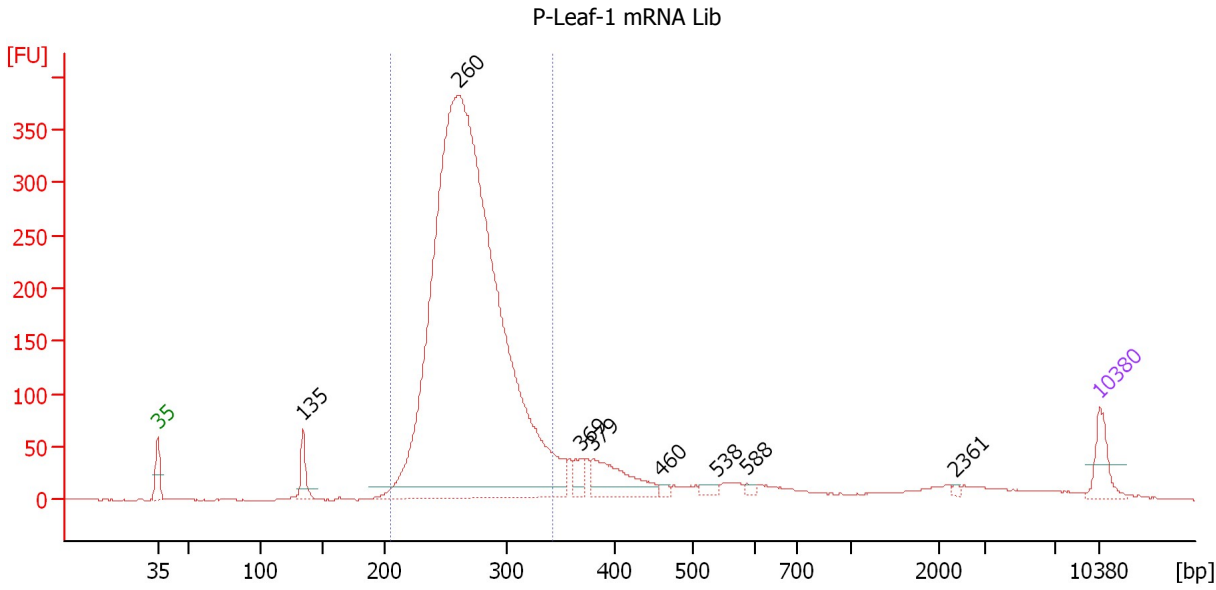
Peak table for Ladder

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	50	150.00	4,545.5	Ladder Peak
3	100	150.00	2,272.7	Ladder Peak
4	150	150.00	1,515.2	Ladder Peak
5	200	150.00	1,136.4	Ladder Peak
6	300	150.00	757.6	Ladder Peak
7	400	150.00	568.2	Ladder Peak
8	500	150.00	454.5	Ladder Peak
9	600	150.00	378.8	Ladder Peak
10	700	150.00	324.7	Ladder Peak
11	1,000	150.00	227.3	Ladder Peak
12	2,000	150.00	113.6	Ladder Peak
13	3,000	150.00	75.8	Ladder Peak
14	7,000	150.00	32.5	Ladder Peak
15	10,380	75.00	10.9	Upper Marker

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-10\2013-06-10_003.xad

Created: 6/10/2013 11:17:24 AM
 Modified: 6/12/2013 4:45:30 PM

Electropherogram Summary Continued ...



Setpoint Deviations for sample 1 : P-Leaf-1 mRNA Lib

Height Threshold [FU] : 10

Overall Results for sample 1 : P-Leaf-1 mRNA Lib

Number of peaks found: 8 Corr. Area 1: 3,379.6
 Noise: 0.2

Peak table for sample 1 : P-Leaf-1 mRNA Lib

Peak	Size [bp]	Conc. [pg/µl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	135	97.25	1,095.5	
3	260	5,157.32	30,028.3	
4	369	50.91	209.0	
5	379	199.48	796.9	
6	460	14.62	48.2	
7	538	22.51	63.4	
8	588	12.62	32.5	
9	2,361	5.92	3.8	
10	10,380	75.00	10.9	Upper Marker

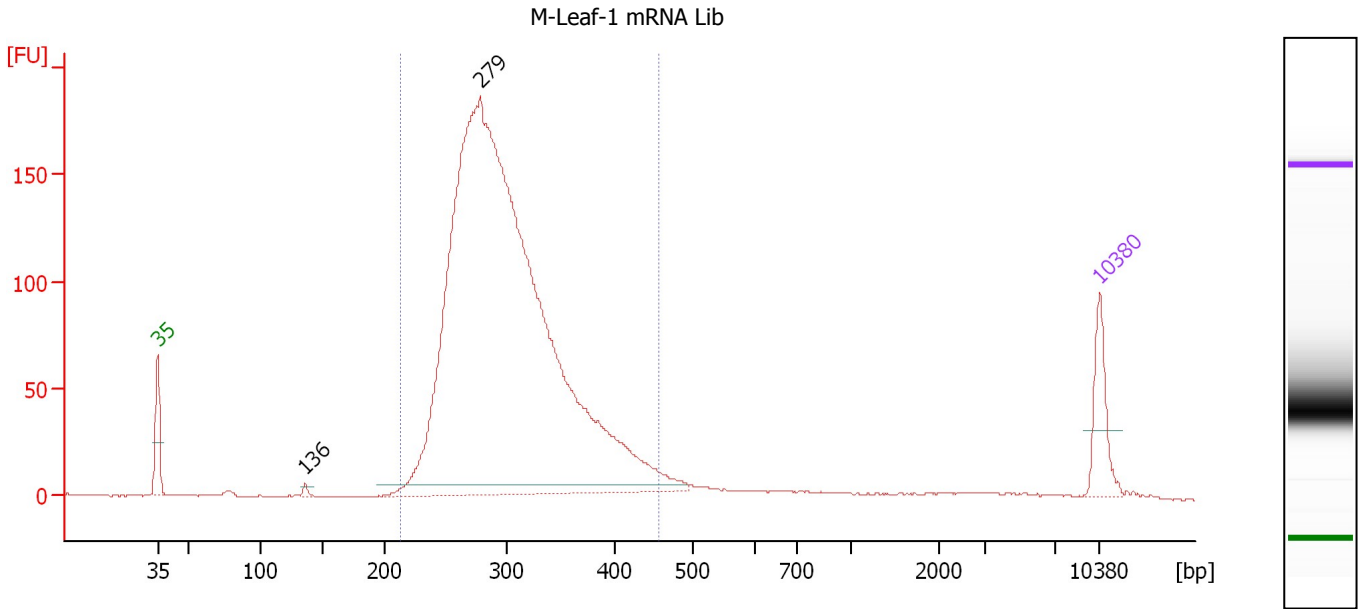
Region table for sample 1 : P-Leaf-1 mRNA Lib

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/µl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
206	344	270	28,202.8	4,990.61	3,379.6	81	9.8	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-10\2013-06-10_003.xad

Created: 6/10/2013 11:17:24 AM
 Modified: 6/12/2013 4:45:30 PM

Electropherogram Summary Continued ...



Overall Results for sample 2 : M-Leaf-1 mRNA Lib

Number of peaks found: 2 Corr. Area 1: 2,199.0
 Noise: 0.2

Peak table for sample 2 : M-Leaf-1 mRNA Lib

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	136	8.36	93.2	
3	279	3,198.26	17,394.3	
4	10,380	75.00	10.9	Upper Marker

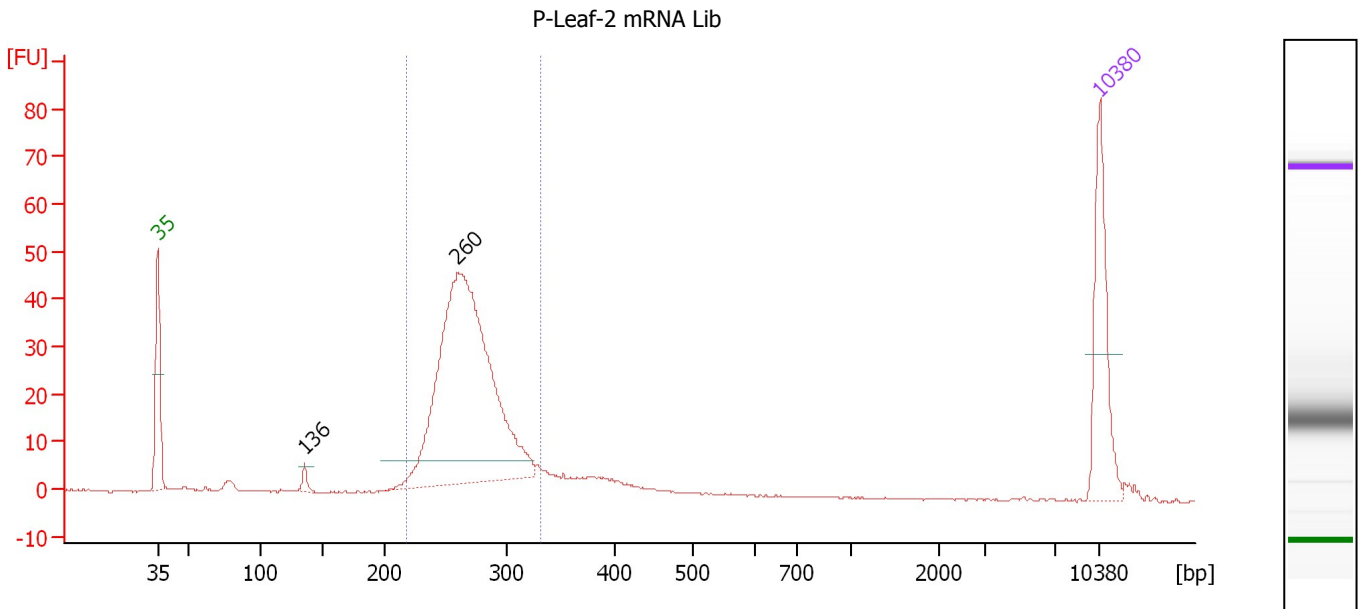
Region table for sample 2 : M-Leaf-1 mRNA Lib

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
213	457	303	15,670.4	3,057.25	2,199.0	94	15.1	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-10\2013-06-10_003.xad

Created: 6/10/2013 11:17:24 AM
 Modified: 6/12/2013 4:45:30 PM

Electropherogram Summary Continued ...



Overall Results for sample 3 : P-Leaf-2 mRNA Lib

Number of peaks found: 2 Corr. Area 1: 350.5
 Noise: 0.1

Peak table for sample 3 : P-Leaf-2 mRNA Lib

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	136	9.12	101.8	
3	260	515.62	3,005.7	
4	10,380	75.00	10.9	Upper Marker

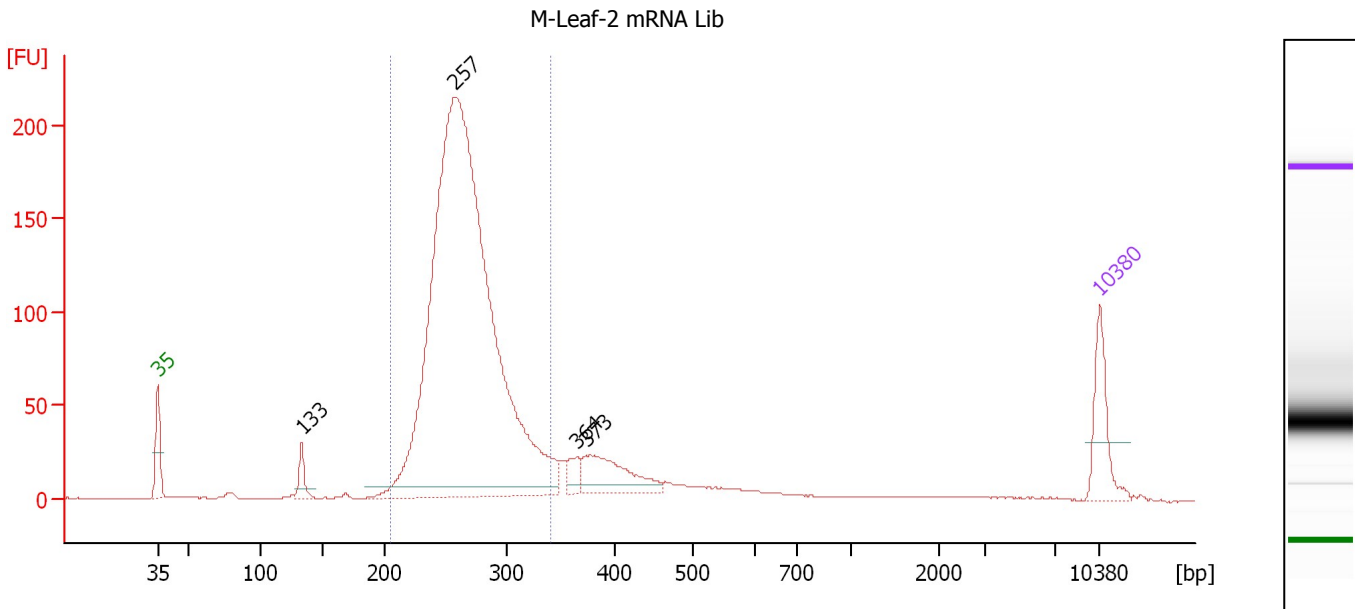
Region table for sample 3 : P-Leaf-2 mRNA Lib

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
219	331	270	3,168.3	561.66	350.5	83	8.4	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-10\2013-06-10_003.xad

Created: 6/10/2013 11:17:24 AM
 Modified: 6/12/2013 4:45:30 PM

Electropherogram Summary Continued ...



Overall Results for sample 4 : M-Leaf-2 mRNA Lib

Number of peaks found: 4 Corr. Area 1: 1,691.9
 Noise: 0.2

Peak table for sample 4 : M-Leaf-2 mRNA Lib

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	133	38.15	433.2	
3	257	2,158.42	12,731.9	
4	364	31.78	132.1	
5	373	120.92	491.1	
6	10,380	75.00	10.9	Upper Marker

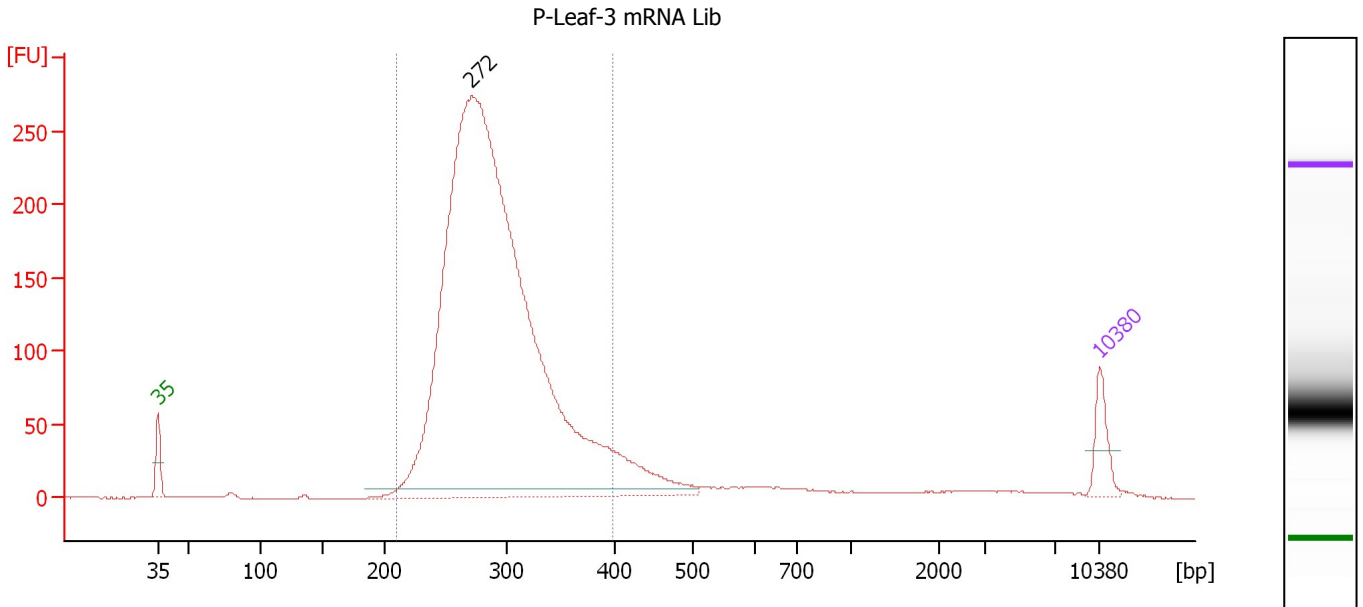
Region table for sample 4 : M-Leaf-2 mRNA Lib

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
205	341	267	12,121.7	2,122.93	1,691.9	81	9.5	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-10\2013-06-10_003.xad

Created: 6/10/2013 11:17:24 AM
 Modified: 6/12/2013 4:45:30 PM

Electropherogram Summary Continued ...



Overall Results for sample 5 : P-Leaf-3 mRNA Lib

Number of peaks found: 1 Corr. Area 1: 2,882.1
 Noise: 0.2

Peak table for sample 5 : P-Leaf-3 mRNA Lib

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	272	4,641.15	25,895.4	
3	10,380	75.00	10.9	Upper Marker

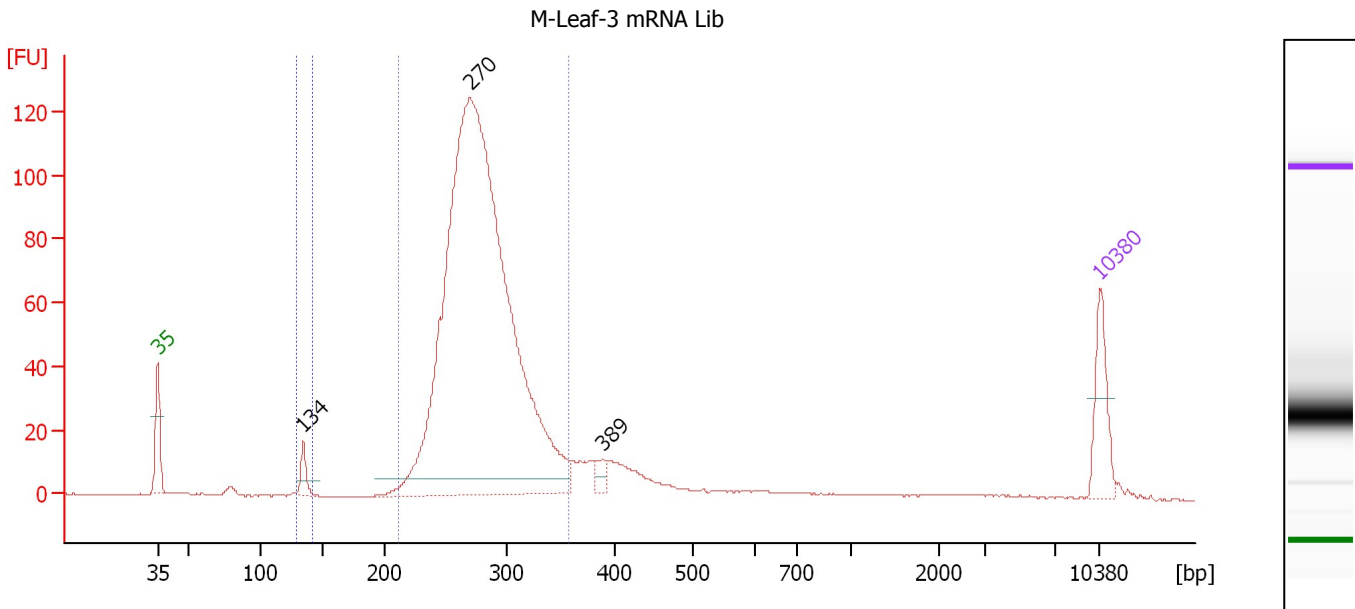
Region table for sample 5 : P-Leaf-3 mRNA Lib

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
210	397	291	22,692.2	4,281.22	2,882.1	89	12.7	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-10\2013-06-10_003.xad

Created: 6/10/2013 11:17:24 AM
 Modified: 6/12/2013 4:45:30 PM

Electropherogram Summary Continued ...



Overall Results for sample 6 : M-Leaf-3 mRNA Lib

Number of peaks found: 3 Corr. Area 1: 1,030.9
 Noise: 0.1 Corr. Area 2: 14.4

Peak table for sample 6 : M-Leaf-3 mRNA Lib

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	134	39.44	444.8	
3	270	2,197.74	12,322.3	
4	389	22.92	89.4	
5	10,380	75.00	10.9	Upper Marker

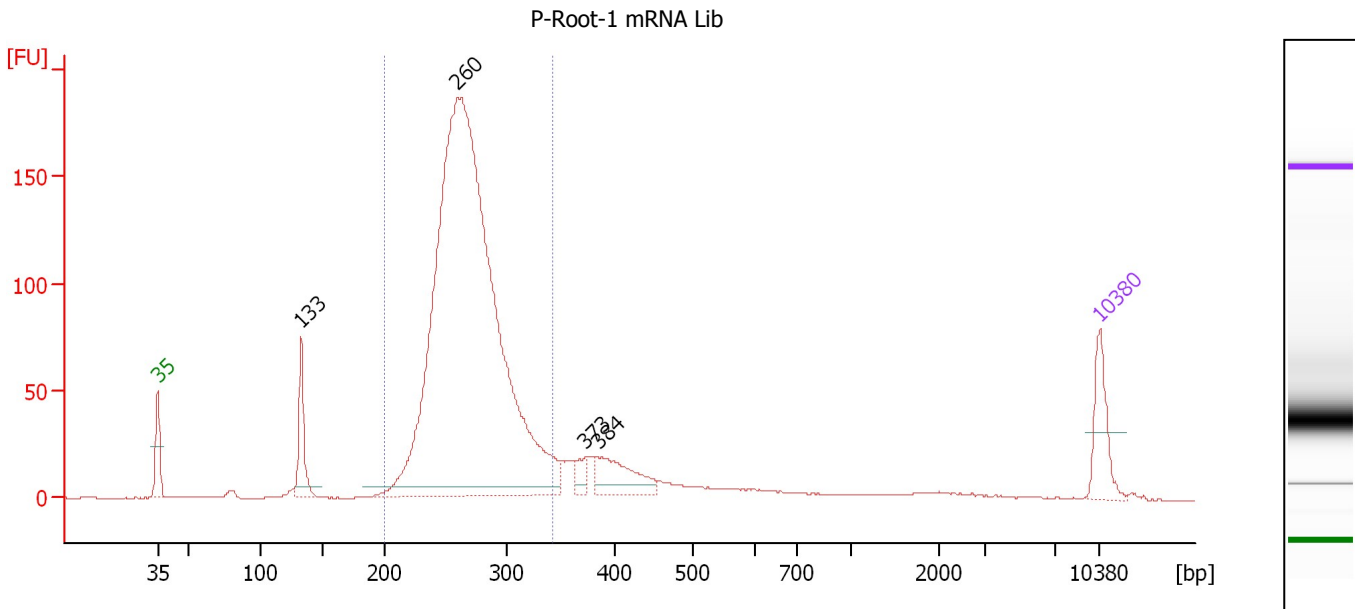
Region table for sample 6 : M-Leaf-3 mRNA Lib

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
130	142	135	413.8	36.80	14.4	1	1.6	Blue
212	357	280	11,802.9	2,160.27	1,030.9	86	9.6	Dark Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-10\2013-06-10_003.xad

Created: 6/10/2013 11:17:24 AM
 Modified: 6/12/2013 4:45:30 PM

Electropherogram Summary Continued ...



Overall Results for sample 7 : P-Root-1 mRNA Lib

Number of peaks found: 4 Corr. Area 1: 1,488.4
 Noise: 0.2

Peak table for sample 7 : P-Root-1 mRNA Lib

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	133	125.92	1,436.9	
3	260	2,503.72	14,605.4	
4	373	30.89	125.6	
5	384	114.27	451.0	
6	10,380	75.00	10.9	Upper Marker

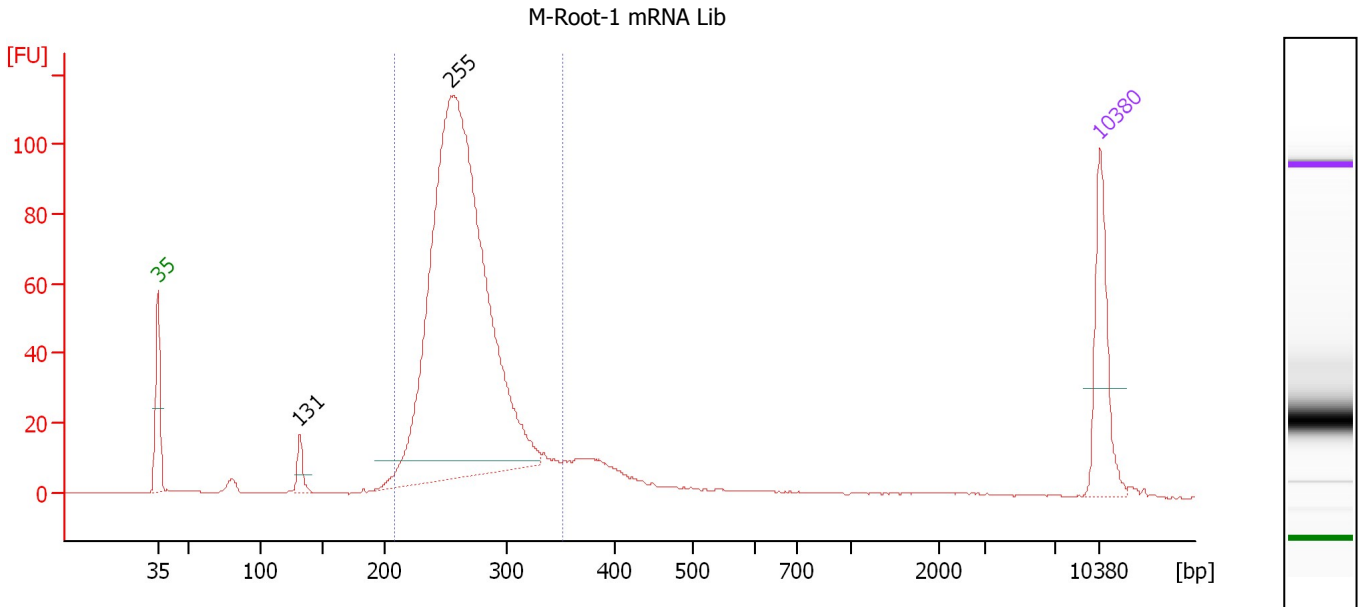
Region table for sample 7 : P-Root-1 mRNA Lib

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
200	343	269	13,937.9	2,462.01	1,488.4	80	9.6	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-10\2013-06-10_003.xad

Created: 6/10/2013 11:17:24 AM
 Modified: 6/12/2013 4:45:30 PM

Electropherogram Summary Continued ...



Overall Results for sample 8 : M-Root-1 mRNA Lib

Number of peaks found: 2 Corr. Area 1: 913.7
 Noise: 0.1

Peak table for sample 8 : M-Root-1 mRNA Lib

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	131	22.88	263.7	
3	255	1,101.83	6,553.8	
4	10,380	75.00	10.9	Upper Marker

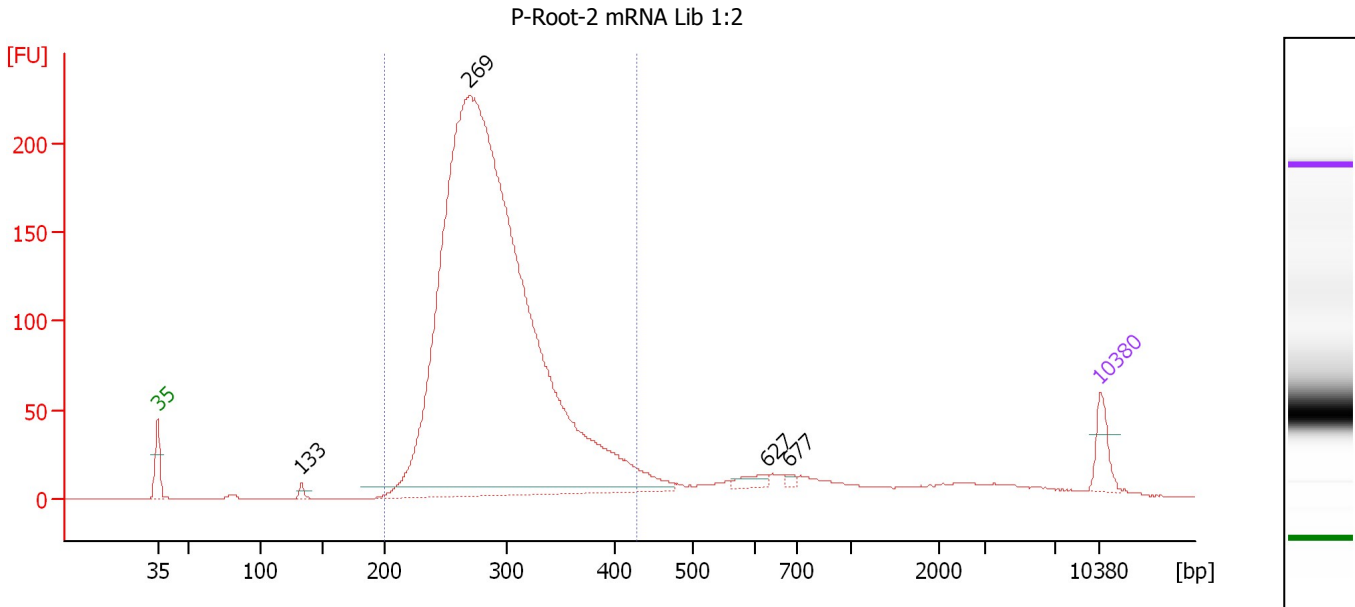
Region table for sample 8 : M-Root-1 mRNA Lib

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
207	351	266	7,013.3	1,224.43	913.7	85	10.1	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-10\2013-06-10_003.xad

Created: 6/10/2013 11:17:24 AM
 Modified: 6/12/2013 4:45:30 PM

Electropherogram Summary Continued ...



Overall Results for sample 9 : P-Root-2 mRNA Lib 1:2

Number of peaks found: 4 Corr. Area 1: 2,522.5
 Noise: 0.2

Peak table for sample 9 : P-Root-2 mRNA Lib 1:2

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	133	24.48	279.1	
3	269	6,530.71	36,727.1	
4	627	37.76	91.3	
5	677	13.40	30.0	
6	10,380	75.00	10.9	Upper Marker

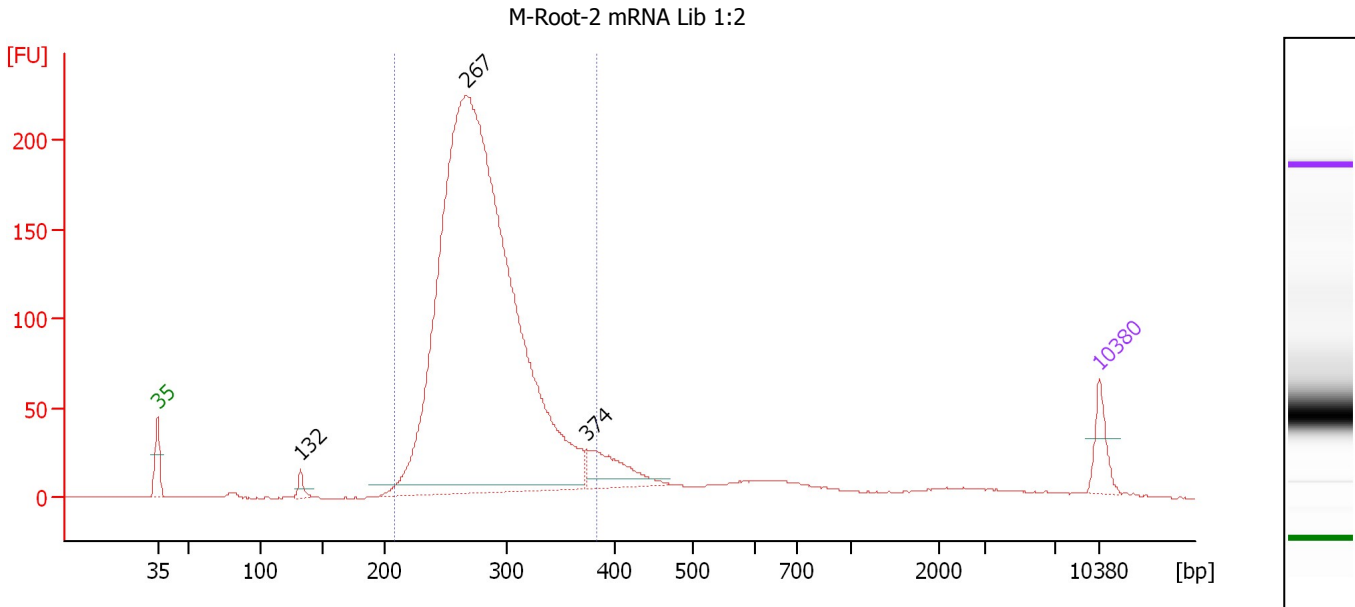
Region table for sample 9 : P-Root-2 mRNA Lib 1:2

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
200	429	292	33,456.3	6,310.97	2,522.5	87	14.3	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-10\2013-06-10_003.xad

Created: 6/10/2013 11:17:24 AM
 Modified: 6/12/2013 4:45:30 PM

Electropherogram Summary Continued ...



Overall Results for sample 10 : M-Root-2 mRNA Lib 1:2

Number of peaks found: 3 Corr. Area 1: 2,185.6
 Noise: 0.2

Peak table for sample 10 : M-Root-2 mRNA Lib 1:2

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	132	38.80	444.2	
3	267	4,861.42	27,559.7	
4	374	183.98	746.1	
5	10,380	75.00	10.9	Upper Marker

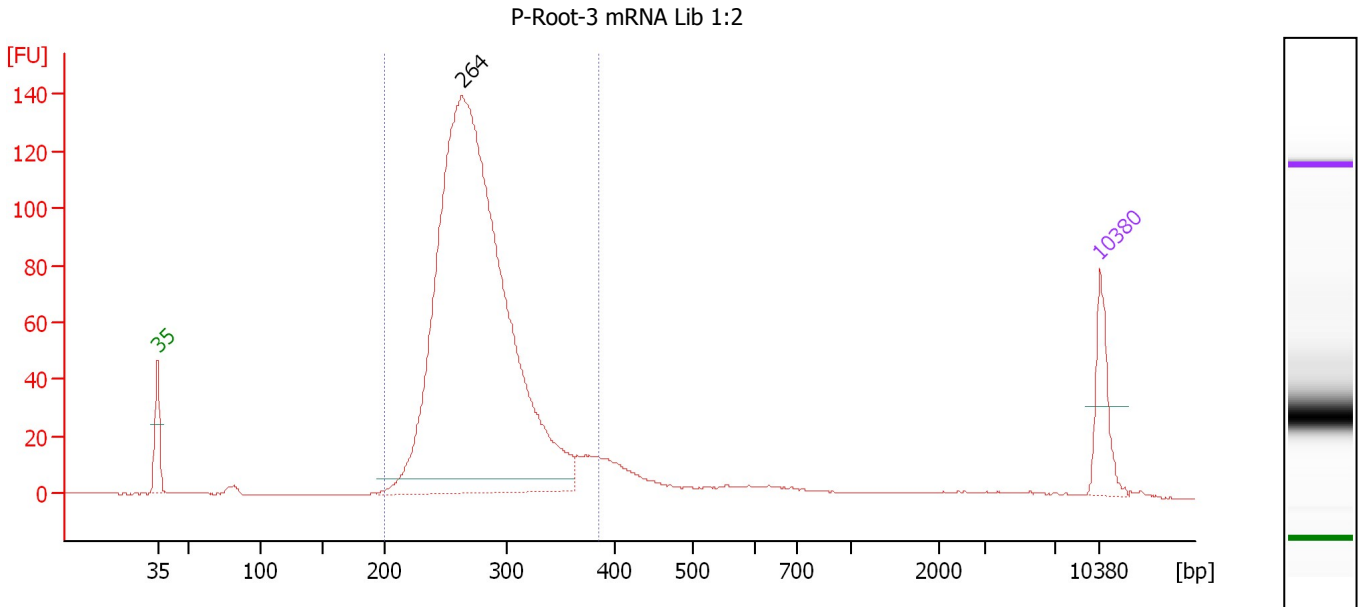
Region table for sample 10 : M-Root-2 mRNA Lib 1:2

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
208	382	282	26,731.8	4,914.08	2,185.6	86	12.0	Blue

Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-10\2013-06-10_003.xad

Created: 6/10/2013 11:17:24 AM
 Modified: 6/12/2013 4:45:30 PM

Electropherogram Summary Continued ...



Overall Results for sample 11 : P-Root-3 mRNA Lib 1:2

Number of peaks found: 1 Corr. Area 1: 1,267.7
 Noise: 0.1

Peak table for sample 11 : P-Root-3 mRNA Lib 1:2

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations
1	35	125.00	5,411.3	Lower Marker
2	264	2,199.17	12,645.4	
3	10,380	75.00	10.9	Upper Marker

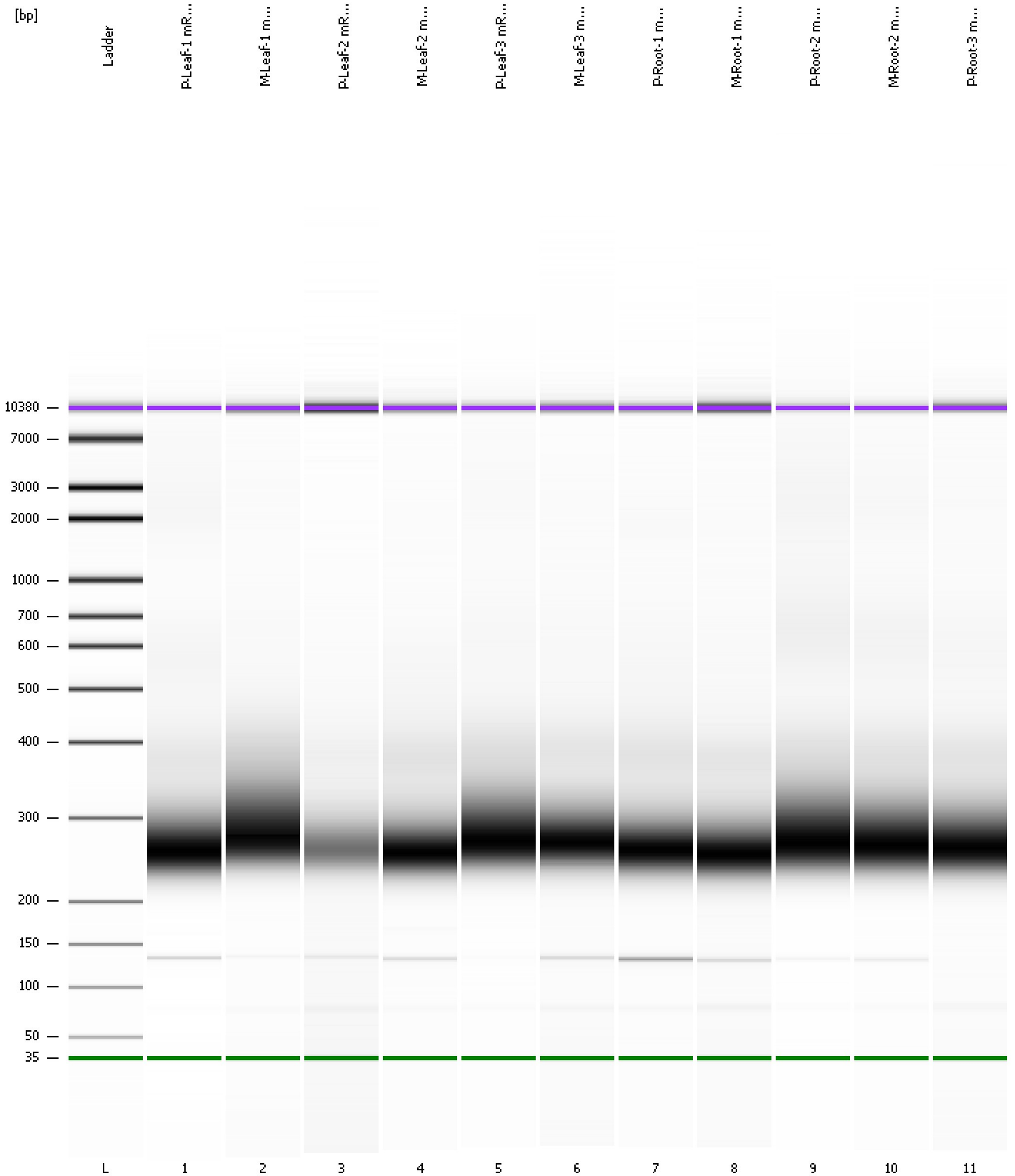
Region table for sample 11 : P-Root-3 mRNA Lib 1:2

From [bp]	To [bp]	Average Size [bp]	Molarity [pmol/l]	Conc. [pg/μl]	Corr. Area	% of Total	Size distribution in CV [%]	Color
200	385	279	12,264.3	2,226.56	1,267.7	90	12.1	Blue

Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-10\2013-06-10_003.xad

Created: 6/10/2013 11:17:24 AM
Modified: 6/12/2013 4:45:30 PM

Gel Image

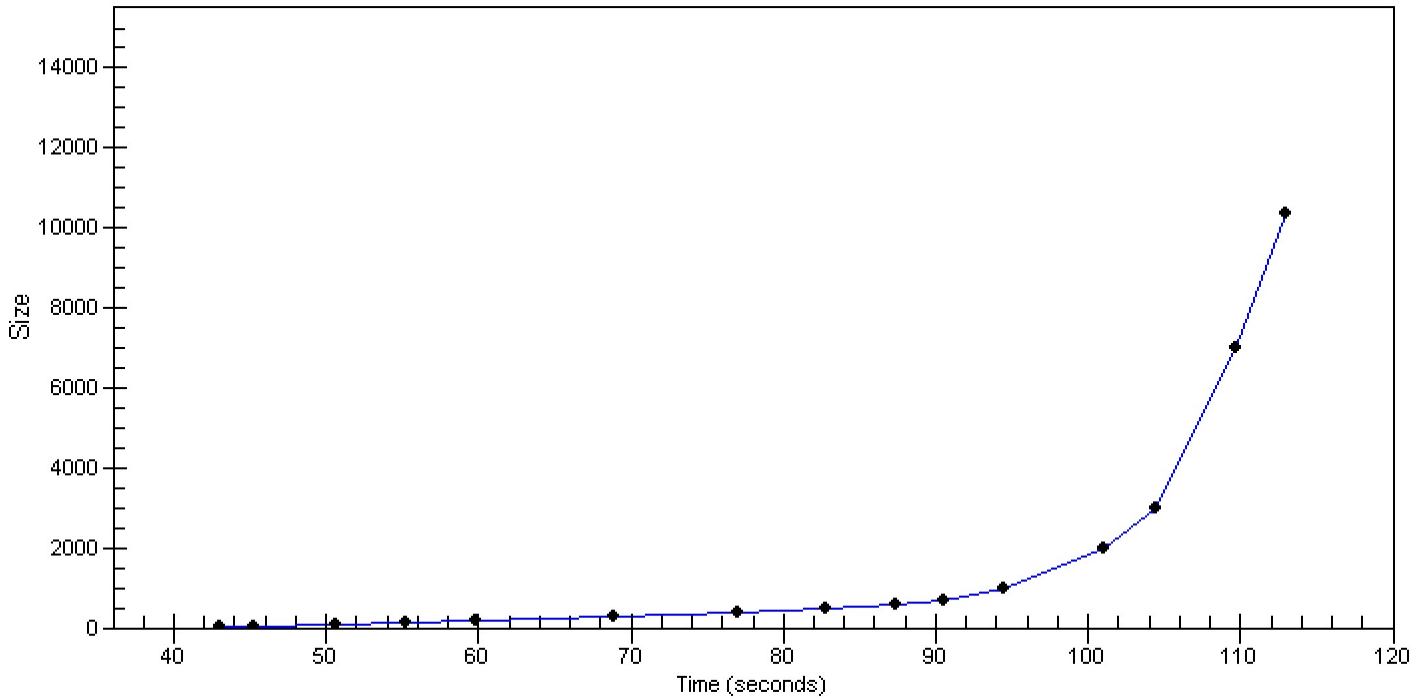


Assay Class: High Sensitivity DNA Assay
Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-10\2013-06-10_003.xad

Created: 6/10/2013 11:17:24 AM
Modified: 6/12/2013 4:45:30 PM

Curves

Standard Curve



Assay Class: High Sensitivity DNA Assay
 Data Path: C:\...ents and Settings\Bioanalyzer\2013-06-10\2013-06-10_003.xad

Created: 6/10/2013 11:17:24 AM
 Modified: 6/12/2013 4:45:30 PM

Run Logbook

Description	Number	Source	Category	Sub Category	Time	Time Zone	User	Host
Run ended on port 1 (Number of wells acquired: 12)		Instrument	Run		6/10/2013 11:58:42 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Documents and Settings\Bioanalyzer\2013-06-10\2013-06-10_003.xad)		Instrument	Run		6/10/2013 11:17:30 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		6/10/2013 11:17:30 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		6/10/2013 11:17:30 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		6/10/2013 11:17:30 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		6/10/2013 11:17:30 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		6/10/2013 11:17:30 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		6/10/2013 11:17:30 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1